

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

ARIGNA TECHNOLOGY LIMITED,

Plaintiff,

vs.

General Motors Company; General Motors  
LLC; Honda Motor Company, Ltd.; American  
Honda Motor Company, Inc.; Nissan Motor  
Company, Ltd.; and Nissan North America,  
Inc.,

Defendants.

Case No. 2:21-cv-174

JURY TRIAL DEMANDED

**COMPLAINT FOR PATENT INFRINGEMENT**

This is an action for patent infringement in which Arigna Technology Limited makes the following allegations against Defendants General Motors Company; General Motors LLC; Honda Motor Company, Ltd.; American Honda Motor Company, Inc.; Nissan Motor Company, Ltd.; and Nissan North America, Inc., each of whom is a manufacturer and/or distributor who, without authority, imports, makes, offers for sales and/or sells in the United States automobiles and components thereof that infringe the Patent asserted in this matter:

**PARTIES**

**Arigna**

1. Plaintiff Arigna Technology Limited (“Plaintiff” or “Arigna”) is an Irish company conducting business at The Hyde Building, Carrickmines, Suite 23, Dublin 18, Ireland. Arigna owns a portfolio of patents that cover power semiconductors for applications in the automotive, industrial automation, and energy industries, and radio frequency amplifiers and circuits with applications in a wide variety of automobiles and consumer electronics products, including

smartphones and laptops. Arigna is the owner of all rights, title, and interest in and to U.S. Patent No. 7,049,850 (the “’850 Patent” or “Asserted Patent”).

**General Motors**

2. Upon information and belief, Defendant General Motors Company is a corporation organized and existing under the laws of Delaware. On information and belief, General Motors Company does business itself, or through its subsidiaries, affiliates, and agents, in the State of Texas and the Eastern District of Texas.

3. Upon information and belief, General Motors LLC is a limited liability company organized and existing under the laws of Delaware. On information and belief, General Motors LLC is a wholly owned subsidiary of General Motors Company and is responsible for making, marketing, distributing, offering for sale, and selling automotive vehicles and components from GM-managed brands Buick, Cadillac, Chevrolet, and GMC in the United States. On information and belief, General Motors LLC has thousands of employees based in and does business across the State of Texas and in this District, including at, e.g., Arlington Assembly in Arlington, Fort Worth Parts Distribution Center in Roanoke, GM Financial Arlington Operations Service Center in Arlington, GM Financial Headquarters in Fort Worth, GM Financial San Antonio Customer Service Center in San Antonio, GM Austin Customer Engagement Center in Austin, Austin IT Innovation Center in Austin, and South Central Regional Office in Irving.

4. The Complaint refers to Defendants General Motors Company and General Motors LLC collectively as “General Motors”. On information and belief, General Motors designs, manufactures, distributes, imports, offers for sale, and/or sells in the State of Texas and the Eastern District of Texas automotive vehicles and components thereof that infringe the ’850 Patent, and/or induces others to commit acts of patent infringement in the State of Texas and the Eastern District

of Texas.

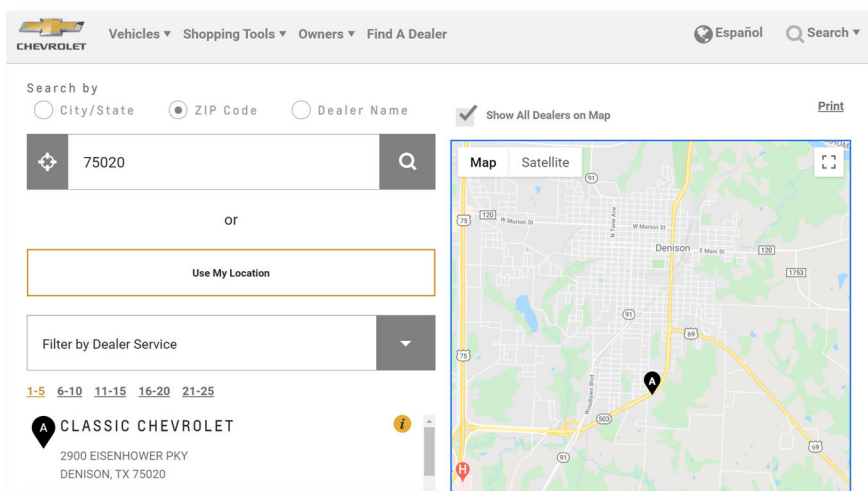
5. General Motors has regular and established places of business, at which it has committed acts of infringement and placed the accused products into the stream of commerce, throughout the State of Texas and in the Eastern District of Texas, including at, e.g., Maverick Chevrolet, Gabriel/Jordan Chevrolet Cadillac, JM Chevrolet Cadillac, Moore Chevrolet Cadillac, Classic Chevrolet Cadillac, and McKaig Chevrolet Buick.

6. Upon information and belief, each of these authorized General Motors dealers in this District are regular, continuous, and established physical places of business of Defendants General Motors, being established, ratified, and/or controlled by General Motors as authorized dealers, which are the exclusive places of business at which General Motors offers for sale, sells, and provides authorized maintenance, warranty, and recall services for the General Motors automotive vehicles and components that infringe the '850 Patent.

7. Upon information and belief, General Motors granted each of these authorized General Motors dealers in this District the exclusive right to offer for sale, sell, and service the infringing General Motors vehicles in this District, at these particular geographical locations, and has further conditioned these authorized dealers' continued offering for sale, sale, and service of the infringing General Motors vehicles in this District on these authorized dealers' continued presence in this District, at these particular geographical locations, so that the infringing General Motors automobiles and components are offered for sale, sold, and/or distributed in this District.

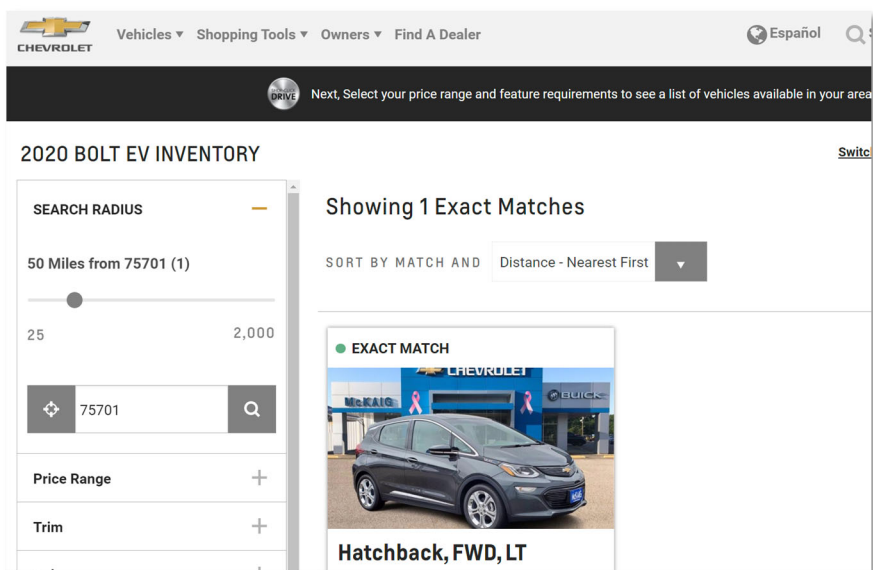
8. General Motors ratifies and holds these authorized General Motors dealers out as the regular and established places of business of General Motors in this District by listing each of them in General Motors' sales directories and on General Motors' website(s), including, e.g., as shown below:

FIGURE 1



9. General Motors further ratifies and holds these authorized General Motors dealers out as the regular and established places of business of General Motors in this District by offering for sale on General Motors' website(s) the infringing automobiles and components at the physical, geographical locations of these authorized General Motors dealers, including, e.g., as shown below:

FIGURE 2



10. General Motors further ratifies and holds these authorized General Motors dealers out as the regular and established places of business of General Motors in this District by requiring these authorized dealers to feature and use General Motors names, branding, trademarks, and/or trade dress, in each of these authorized dealers' names, including, e.g., Maverick Chevrolet, Gabriel/Jordan Chevrolet Cadillac, JM Chevrolet Cadillac, Moore Chevrolet Cadillac, Classic Chevrolet Cadillac, and McKaig Chevrolet Buick, as well as in the marketing and advertising materials that these authorized dealers use and make to offer for sale and sell the infringing automobiles and components in this District, such as on each authorized dealer's website hosted and shown to consumers in this District.

11. General Motors further ratifies and holds these authorized General Motors dealers out as the regular and established places of business of General Motors in this District by controlling in whole or in part the name, geographical location, layout, structure, marketing, branding, and overall look and feel of these exclusive places to test drive and purchase the infringing General Motors automobiles and components, including, e.g., as shown below:

**FIGURE 3**



**FIGURE 4**



12. General Motors further ratifies and holds these authorized General Motors dealers out as the regular and established places of business of General Motors in this District by requiring these businesses to store, display, distribute, and/or offer for sale marketing materials, brochures, product specifications, service information, warranty information, financing information, and various other literature, as well as General Motors authorized service, parts, and accessories, for the infringing automobiles and components, including, e.g., as shown below:

**FIGURE 5**



13. General Motors further ratifies and holds these authorized General Motors dealers out as the regular and established places of business of General Motors in this District by establishing, authorizing, and requiring these places of business to offer to consumers in this District, at the time of sale and/or distribution of the infringing automobiles and components, General Motors financial services and products, General Motors warranties, General Motors service from General Motors certified and/or trained technicians, General Motors parts, and General Motors accessories.

14. General Motors further ratifies and holds these authorized General Motors dealers out as the regular and established places of business of General Motors in this District by establishing, authorizing, and requiring consumers in this District to visit and use these authorized dealers in order to obtain authorized General Motors service, obtain scheduled maintenance under any General Motors service plan, make repairs pursuant to any General Motors warranty, or obtain any recall/campaign work for all new General Motors automobiles and components, including the infringing automobiles and components.



15. General Motors further ratifies and holds these authorized General Motors dealers out as the regular and established places of business of General Motors in this District by recruiting, hiring, training, offering compensation and benefits to, controlling, and/or labeling as authorized or certified General Motors employees and agents some or all of the employees or agents employed in this District by these authorized dealers—including for example, General Motors certified brand advisors, General Motors certified geniuses or experts, General Motors certified technicians, and General Motors certified service advisors.

16. General Motors further ratifies and holds these authorized General Motors dealers out as the regular and established places of business of General Motors by providing these dealers sales promotions, providing these dealers financing for dealership improvements directed by General Motors, and sharing customer data with these dealers to provide customized General Motors services.

17. General Motors has established and ratified and holds these authorized General Motors dealers out as the regular and established places of business of General Motors by directing and controlling these authorized dealers' actions, sales, and services in the foregoing manner, and has consented to these authorized dealers acting on General Motors' behalf and being the exclusive places of business whereby the infringing automobiles and components are distributed, offered for sale, sold, and serviced in order to place these infringing articles into the stream of commerce in this District, and these authorized dealers have consented to act on General Motors' behalf pursuant to the foregoing terms of control and direction in order to be able to provide these General Motors automobiles, components, and services to consumers in this District.



**Honda**

18. Upon information and belief, Defendant Honda Motor Company, Ltd. is a foreign company organized and existing under the laws of Japan with its headquarters at 2-1-1, Minami-Aoyama, Minato-Ku, Tokyo, 107-8556, Japan. On information and belief, Honda Motor Company, Ltd. does business itself, or through its subsidiaries, affiliates, and agents, in the State of Texas and the Eastern District of Texas.

19. Upon information and belief, Defendant American Honda Motor Company, Inc. is a corporation organized and existing under the laws of California. On information and belief, American Honda Motor Company, Inc. is a wholly owned subsidiary of Honda Motor Company, Ltd. and is responsible for importing, making, marketing, distributing, offering for sale, and selling automotive vehicles and components from Honda-managed brands (e.g., Honda, Acura, etc.) in the United States. On information and belief, American Honda Motor Company, Inc. has hundreds of employees based in and does business across the State of Texas, including at the Honda Rider Education Center in Irving, the Parts Center in Irving, and the American Honda Finance Center in Irving.

20. The Complaint refers to Defendants Honda Motor Company, Ltd. and American Honda Motor Company, Inc. collectively as “Honda”. On information and belief, Honda designs, manufactures, distributes, imports, offers for sale, and/or sells in the State of Texas and the Eastern District of Texas automotive vehicles and components thereof that infringe the '850 Patent, and/or induces others to commit acts of patent infringement in the State of Texas and the Eastern District of Texas.

21. Honda has regular and established places of business, at which it has committed acts of infringement and placed the accused products into the stream of commerce, throughout the

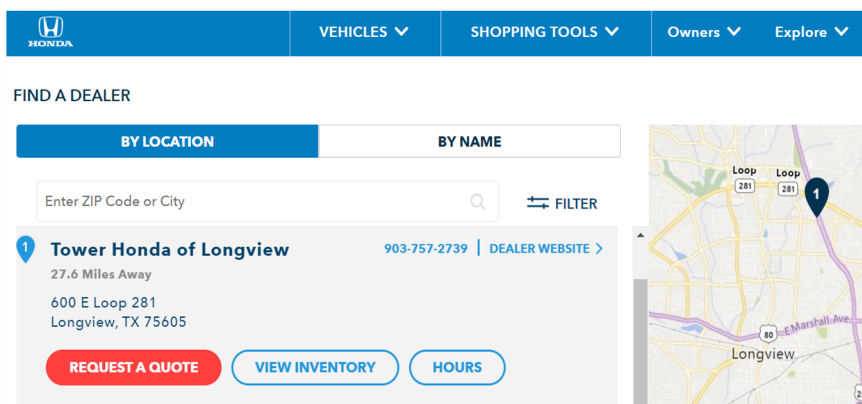
State of Texas and in the Eastern District of Texas, including at, e.g., Tower Honda of Longview, Jack O' Diamonds Honda, Loving Honda, Twin City Honda, Orr Honda, Honda Cars of McKinney, and Honda of Frisco.

22. Upon information and belief, each of these authorized Honda dealers in this District are regular, continuous, and established physical places of business of Defendants Honda, being established, ratified, and/or controlled by Honda as authorized dealers, which are the exclusive places of business at which Honda offers for sale, sells, and provides authorized maintenance, warranty, and recall services for the Honda automotive vehicles and components that infringe the '850 Patent.

23. Upon information and belief, Honda granted each of these authorized Honda dealers in this District the exclusive right to offer for sale, sell, and service the infringing Honda vehicles in this District, at these particular geographical locations, and has further conditioned these authorized dealers' continued offering for sale, sale, and service of the infringing Honda vehicles in this District on these authorized dealers' continued presence in this District, at these particular geographical locations, so that the infringing Honda automobiles and components are offered for sale, sold, and/or distributed in this District.

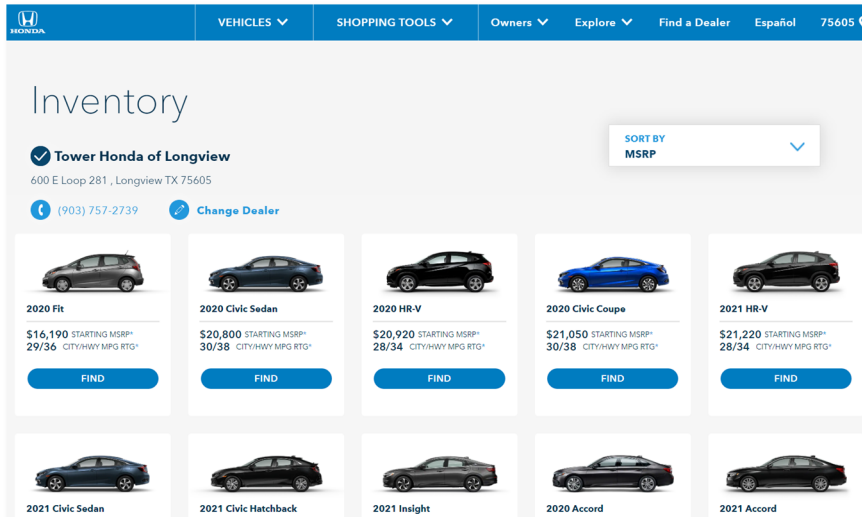
24. Honda ratifies and holds these authorized Honda dealers out as the regular and established places of business of Honda in this District by listing each of them in Honda's sales directories and on Honda's website(s), including, e.g., as shown below:

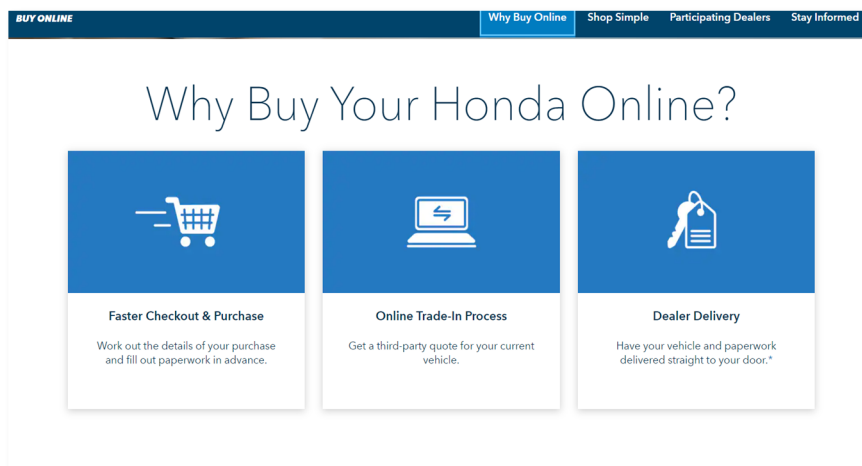
FIGURE 6



25. Honda further ratifies and holds these authorized Honda dealers out as the regular and established places of business of Honda in this District by offering for sale on Honda's website(s) the infringing automobiles and components at the physical, geographical locations of these authorized Honda dealers, including, e.g., as shown below:

FIGURE 7



**FIGURE 8****FIGURE 9**

**shop simple**  
with Honda

The Shop Simple program offers customers a more seamless online buying experience, with a direct link to inventory and other added benefits.

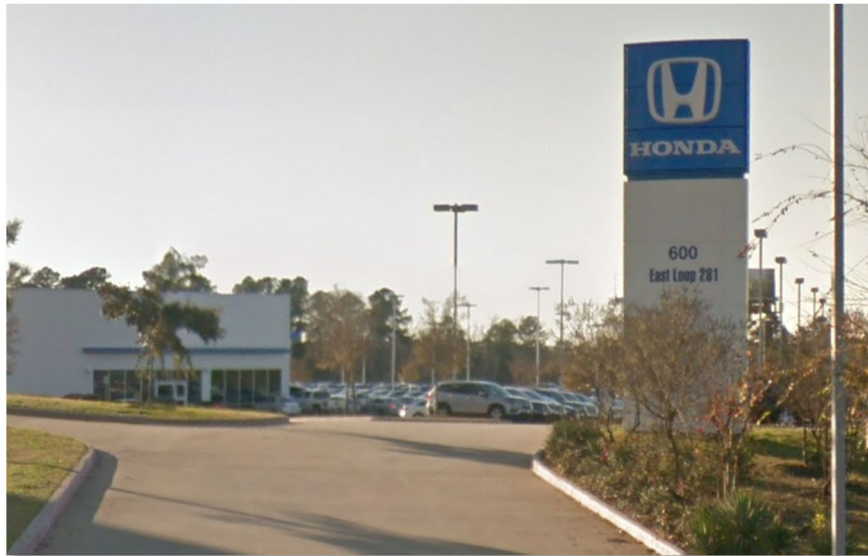
Features	Buy Online Dealers	Shop Simple Dealers
Fast & Remote Checkout	✓	✓
Online Trade-In Options	✓	✓
Dealer Delivery*	✓	✓
Online Loan Approval		✓
Direct Inventory Link		✓
Apply Honda Offers Online		✓

26. Honda further ratifies and holds these authorized Honda dealers out as the regular and established places of business of Honda in this District by requiring these authorized dealers to feature and use Honda names, branding, trademarks, and/or trade dress, in each of these authorized dealers' names, including Tower Honda of Longview, Jack O' Diamonds Honda, Loving Honda, Twin City Honda, Orr Honda, Honda Cars of McKinney, and Honda of Frisco, as well as in the marketing and advertising materials that these authorized dealers use and make to

offer for sale and sell the infringing automobiles and components in this District, such as on each authorized dealer's website hosted and shown to consumers in this District.

27. Honda further ratifies and holds these authorized Honda dealers out as the regular and established places of business of Honda in this District by controlling in whole or in part the name, geographical location, layout, structure, marketing, branding, and overall look and feel of these exclusive places to test drive and purchase the infringing Honda automobiles and components, including, e.g., as shown below:

**FIGURE 10**



**FIGURE 11**



28. Honda further ratifies and holds these authorized Honda dealers out as the regular and established places of business of Honda in this District by requiring these businesses to store, display, distribute, and/or offer for sale marketing materials, brochures, product specifications, service information, warranty information, financing information, and various other literature, as well as Honda authorized service, parts, and accessories, for the infringing automobiles and components, including, e.g., as shown below:

**FIGURE 12**



**FIGURE 13**



29. Honda further ratifies and holds these authorized Honda dealers out as the regular and established places of business of Honda in this District by establishing, authorizing, and requiring these places of business to offer to consumers in this District, at the time of sale and/or distribution of the infringing automobiles and components, Honda financial services and products, Honda warranties, Honda service from Honda certified and/or trained technicians, Honda parts, and Honda accessories.

30. Honda further ratifies and holds these authorized Honda dealers out as the regular and established places of business of Honda in this District by establishing, authorizing, and requiring consumers in this District to visit and use these authorized dealers in order to obtain authorized Honda service, obtain scheduled maintenance under any Honda service plan, make repairs pursuant to any Honda warranty, or obtain any recall/campaign work for all new Honda automobiles and components, including the infringing automobiles and components.

31. Honda further ratifies and holds these authorized Honda dealers out as the regular and established places of business of Honda in this District by recruiting, hiring, training, offering



compensation and benefits to, controlling, and/or labeling as authorized or certified Honda employees and agents some or all of the employees or agents employed in this District by these authorized dealers—including for example, Honda certified brand advisors, Honda certified geniuses or experts, Honda certified technicians, and Honda certified service advisors.

32. Honda further ratifies and holds these authorized Honda dealers out as the regular and established places of business of Honda by providing these dealers sales promotions, financing for dealership improvements directed by Honda, and modernized processes and IT systems that reduce the time needed for administrative tasks in providing after-sales certified Honda services, and by sharing customer data with these dealers to provide customized Honda services.

33. Honda has established and ratified and holds these authorized Honda dealers out as the regular and established places of business of Honda by directing and controlling these authorized dealers' actions, sales, and services in the foregoing manner, and has consented to these authorized dealers acting on Honda's behalf and being the exclusive places of business whereby the infringing automobiles and components are distributed, offered for sale, sold, and serviced in order to place these infringing articles into the stream of commerce in this District, and these authorized dealers have consented to act on Honda's behalf pursuant to the foregoing terms of control and direction in order to be able to provide these Honda automobiles, components, and services to consumers in this District.

### **Nissan**

34. Upon information and belief, Defendant Nissan Motor Company, Ltd. is a foreign company organized and existing under the laws of Japan with its headquarters at 1-1, Takashima 1-chome, Nishi-Ku, Yokohama-shi, Kanagawa 220-8686, Japan. On information and belief,

Nissan Motor Company, Ltd. does business itself, or through its subsidiaries, affiliates, and agents, in the State of Texas and the Eastern District of Texas.

35. Upon information and belief, Defendant Nissan North America, Inc. is a corporation organized and existing under the laws of California. On information and belief, Nissan North America, Inc. is a wholly owned subsidiary of Nissan Motor Company, Ltd. and is responsible for importing, marketing, distributing, and selling automotive vehicles and components from Nissan-managed brands (e.g., Nissan, Infiniti, etc.) in the United States. On information and belief, Nissan North America, Inc. has hundreds of employees based in and does business across the State of Texas, including at the Nissan Motor Acceptance Corporation Customer Center in Irving, the Nissan Regional Office in Irving, the Nissan Dealer Operations in Dallas and Fort Worth, the Nissan Parts Distribution Center in Dallas, the Nissan Technical Training Academy in Farmers Branch, and the Nissan Technical Training Academy in Pasadena.

36. The Complaint refers to Defendants Nissan Motor Company, Ltd. and Nissan North America, Inc. collectively as “Nissan”. On information and belief, Nissan designs, manufactures, distributes, imports, and/or offers for sale in the State of Texas and the Eastern District of Texas automotive vehicles and components thereof that infringe the ’850 Patent, and/or induces others to commit acts of patent infringement in the State of Texas and the Eastern District of Texas.

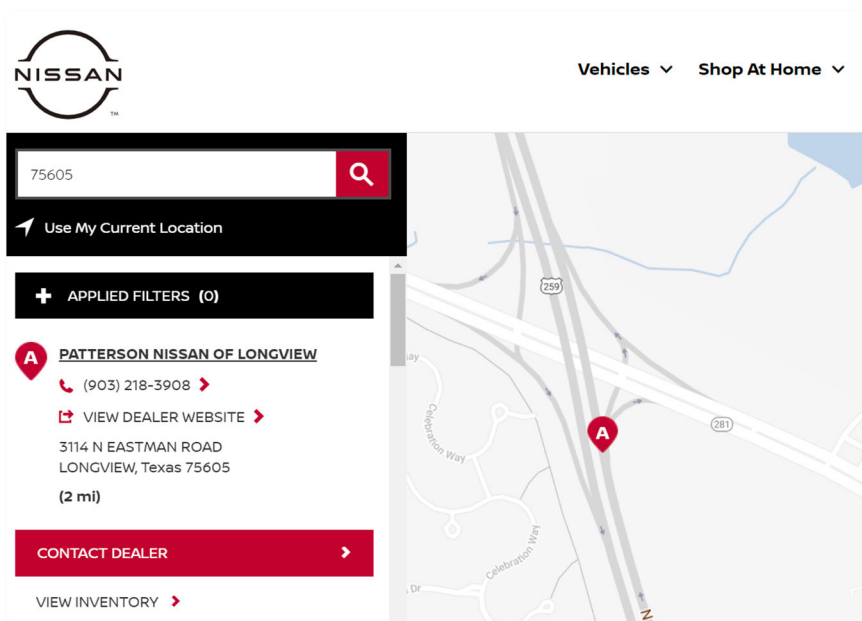
37. Nissan has regular and established places of business, at which it has committed acts of infringement and placed the accused products into the stream of commerce, throughout the State of Texas and in the Eastern District of Texas, including at, e.g., Nissan of McKinney, Matthews Nissan of Paris, Peltier Nissan, Classic Nissan of Texoma, Patterson Nissan, Smith Mankins Nissan, Loving Nissan, Nissan of Silsbee, Twin City Nissan, Mike Smith Nissan, and Crest Infiniti.

38. Upon information and belief, each of these authorized Nissan and Infiniti dealers in this District are regular, continuous, and established physical places of business of Defendants Nissan, being established, ratified, and/or controlled by Nissan as authorized dealers, which are the exclusive places of business at which Nissan offers for sale, sells, and provides authorized maintenance, warranty, and recall services for the Nissan and Infiniti automotive vehicles and components that infringe the '850 Patent.

39. Upon information and belief, Nissan granted each of these authorized Nissan and Infiniti dealers in this District the exclusive right to offer for sale, sell, and service the infringing Nissan and Infiniti vehicles in this District, at these particular geographical locations, and has further conditioned these authorized dealers' continued offering for sale, sale, and service of the infringing Nissan and Infiniti vehicles in this District on these authorized dealers' continued presence in this District, at these particular geographical locations, so that the infringing Nissan and Infiniti automobiles and components are offered for sale, sold, and/or distributed in this District.

40. Nissan ratifies and holds these authorized Nissan and Infiniti dealers out as the regular and established places of business of Nissan in this District by listing each of them in Nissan's sales directories and on Nissan's website(s), including, e.g., as shown below:

FIGURE 14



41. Nissan further ratifies and holds these authorized Nissan and Infiniti dealers out as the regular and established places of business of Nissan in this District by offering for sale on Nissan's website(s) the infringing automobiles and components at the physical, geographical locations of these authorized Nissan and Infiniti dealers, including, e.g., as shown below:

FIGURE 15

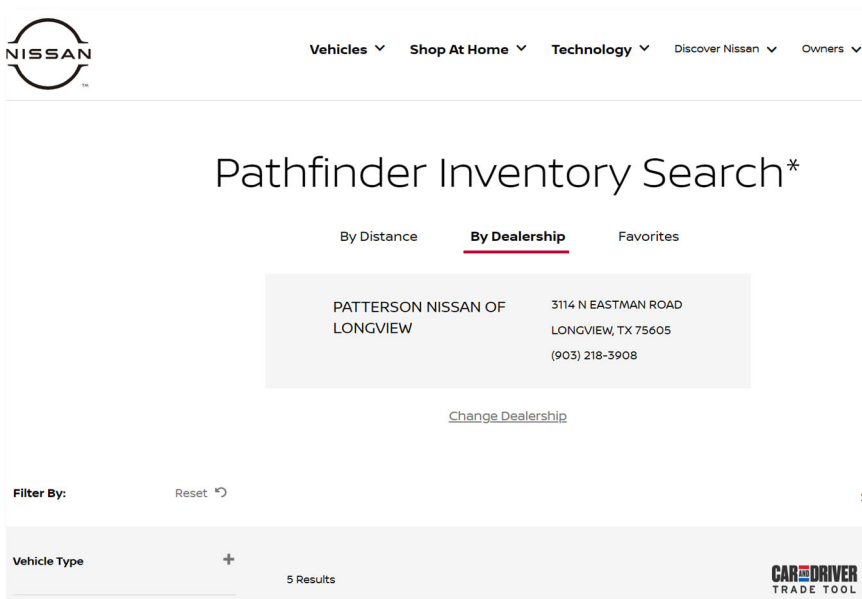


FIGURE 16

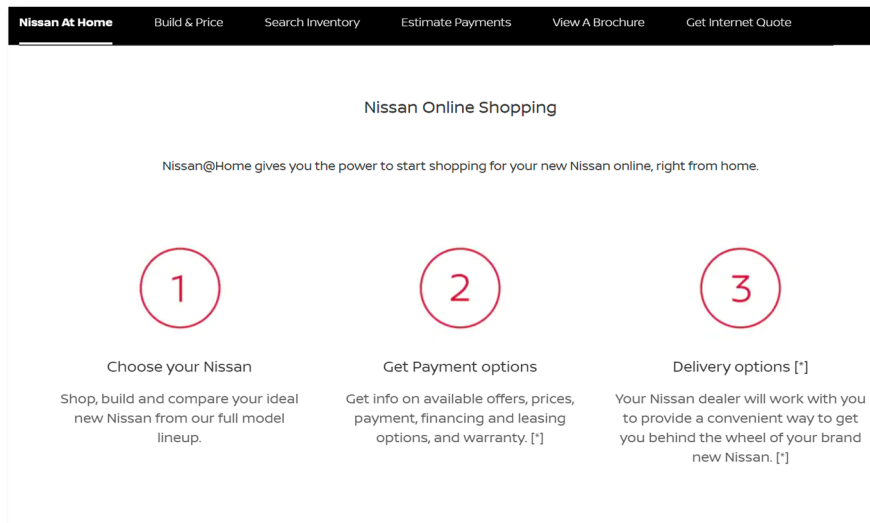
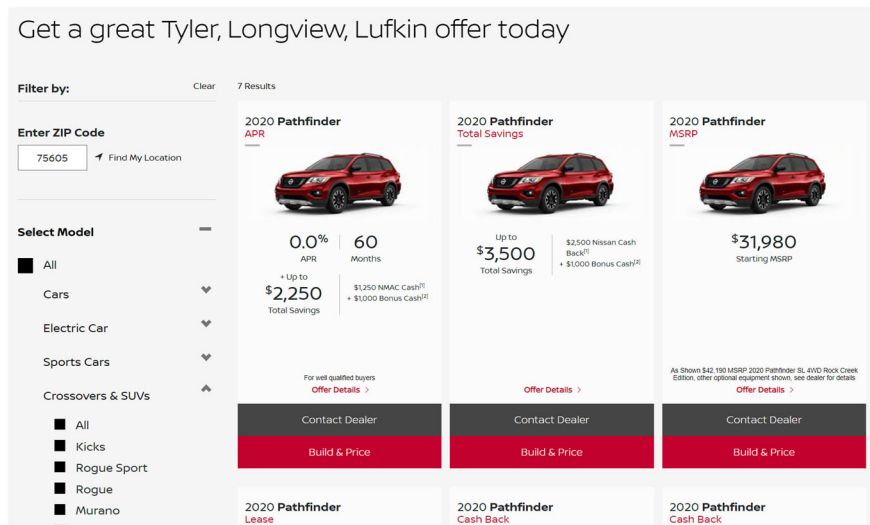


FIGURE 17



42. Nissan further ratifies and holds these authorized Nissan and Infiniti dealers out as the regular and established places of business of Nissan in this District by requiring these authorized dealers to feature and use Nissan names, branding, trademarks, and/or trade dress, in each of these authorized dealers' names, including Nissan of McKinney, Matthews Nissan of Paris, Peltier Nissan, Classic Nissan of Texoma, Patterson Nissan, Smith Mankins Nissan, Loving Nissan, Nissan of Silsbee, Twin City Nissan, Mike Smith Nissan, and Crest Infiniti, as well as in the marketing and advertising materials that these authorized dealers use and make to offer for sale

and sell the infringing automobiles and components in this District, such as on each authorized dealer's website hosted and shown to consumers in this District.

43. Nissan further ratifies and holds these authorized Nissan and Infiniti dealers out as the regular and established places of business of Nissan in this District by controlling in whole or in part the name, geographical location, layout, structure, marketing, branding, and overall look and feel of these exclusive places to test drive and purchase the infringing Nissan and Infiniti automobiles and components, including, e.g., as shown below:

**FIGURE 18**



**FIGURE 19**



44. Nissan further ratifies and holds these authorized Nissan and Infiniti dealers out as the regular and established places of business of Nissan in this District by requiring these businesses to store, display, distribute, and/or offer for sale marketing materials, brochures, product specifications, service information, warranty information, financing information, and various other literature, as well as Nissan authorized service, parts, and accessories, for the infringing automobiles and components, including, e.g., as shown below:



**FIGURE 20**



**FIGURE 21**



45. Nissan further ratifies and holds these authorized Nissan and Infiniti dealers out as the regular and established places of business of Nissan in this District by establishing, authorizing, and requiring these places of business to offer to consumers in this District, at the time of sale and/or distribution of the infringing automobiles and components, Nissan financial services and products, Nissan warranties, Nissan service from Nissan certified and/or trained technicians, Nissan parts, and Nissan accessories.

46. Nissan further ratifies and holds these authorized Nissan and Infiniti dealers out as the regular and established places of business of Nissan in this District by establishing, authorizing, and requiring consumers in this District to visit and use these authorized dealers in order to obtain authorized Nissan service, obtain scheduled maintenance under any Nissan service plan, make repairs pursuant to any Nissan warranty, or obtain any recall/campaign work for all new Nissan and Infiniti automobiles and components, including the infringing automobiles and components.

47. Nissan further ratifies and holds these authorized Nissan and Infiniti dealers out as the regular and established places of business of Nissan in this District by recruiting, hiring, training, offering compensation and benefits to, controlling, and/or labeling as authorized or certified Nissan employees and agents some or all of the employees or agents employed in this District by these authorized dealers—including for example, Nissan certified brand advisors, Nissan certified geniuses or experts, Nissan certified technicians, and Nissan certified service advisors.

48. Nissan further ratifies and holds these authorized Nissan and Infiniti dealers out as the regular and established places of business of Nissan by providing these dealers sales promotions, providing these dealers financing for dealership improvements directed by Nissan, and sharing customer data with these dealers to provide customized Nissan services.

49. Nissan has established and ratified and holds these authorized Nissan and Infiniti dealers out as the regular and established places of business of Nissan by directing and controlling these authorized dealers' actions, sales, and services in the foregoing manner, and has consented to these authorized dealers acting on Nissan's behalf and being the exclusive places of business whereby the infringing automobiles and components are distributed, offered for sale, sold, and serviced in order to place these infringing articles into the stream of commerce in this District, and

these authorized dealers have consented to act on Nissan's behalf pursuant to the foregoing terms of control and direction in order to be able to provide these Nissan and Infiniti automobiles, components, and services to consumers in this District.

### **JURISDICTION AND VENUE**

50. This is an action for patent infringement arising under the patent laws of the United States. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

51. This Court has personal jurisdiction over each Defendant because each Defendant conducts business in and has committed acts of patent infringement and/or induced others to commit acts of patent infringement in this District, the State of Texas, and elsewhere in the United States and has established minimum contacts with this forum state such that the exercise of jurisdiction over each Defendant would not offend the traditional notions of fair play and substantial justice. Upon information and belief, each Defendant transacts substantial business with entities and individuals in the State of Texas and the Eastern District of Texas, by among other things, importing, offering to sell, distributing, and selling products that infringe the Asserted Patent, including the infringing automotive vehicles and components thereof that each Defendant purposefully directs into the State of Texas and this District as alleged herein, as well as by providing service and support to its customers in this District. Each Defendant places the accused automotive vehicles and components thereof into the stream of commerce via authorized and established distribution channels with the knowledge and expectation that they will be sold in the State of Texas, including this District, and do not otherwise permit the sale of the accused automotive vehicles and components thereof in the State of Texas, or in this District, outside of these established, authorized, and ratified distribution channels and dealer networks.

52. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391(b)-(c) and 1400(b),

because each and every Defendant either is a foreign corporation who is not a resident of the United States and is subject to personal jurisdiction in this District, and thus is subject to venue in any judicial district including this District, resides in this District, and/or has committed acts of infringement in this District and has a regular and established place of business in this District.

53. Each Defendant is subject to this Court's general and specific jurisdiction pursuant to due process and/or the Texas Long Arm Statute due at least to each Defendant's substantial business in the State of Texas and this District, including through its past infringing activities, because each Defendant regularly does and solicits business herein, and/or because each Defendant has engaged in persistent conduct and/or has derived substantial revenues from goods and services provided to customers in the State of Texas and this District.

#### **SINGLE ACTION**

54. This suit is commenced against Defendants pursuant to 35 U.S.C. § 299 in a single action because (a) a right to relief is asserted against Defendants jointly, severally, or in the alternative with respect to or arising out of the same transaction, occurrence, or series of transactions or occurrences relating to the making, using, importing into the United States, offering for sale, and/or selling of the same accused products or processes and (b) questions of fact common to all Defendants will arise in the action.

55. Plaintiff is informed and believes, and on that basis alleges, that Defendants General Motors, Honda, and Nissan import, manufacture, offer for sale, and/or sell the same products and processes accused in this action, including because, as alleged below, each Defendant designs, manufactures, assembles, imports, offers for sale, and/or sells automotive vehicles and components thereof that incorporate the NXP Semiconductors MC339XX chip package.

### **THE ASSERTED PATENT**

56. This action asserts causes of action for infringement of United States Patent No. 7,049,850. The Asserted Patent is a valid and enforceable United States Patent, the entire right, title, and interest to which Arigna owns by assignment.

57. The Asserted Patent claims a semiconductor device used in, as one example, a vehicle's engine control module to regulate the throttle plate of the engine.

58. On May 23, 2006, the U.S. Patent and Trademark Office duly and legally issued the '850 Patent, which is entitled "Semiconductor Device with a Voltage Detecting Device to Prevent Shoot-Through Phenomenon in First and Second Complementary Switching Devices." Plaintiff holds all rights and title to the Patent, including the sole and exclusive right to bring a claim for its infringement. A true and correct copy of the Patent is attached as **Exhibit A**.

59. The '850 Patent generally claims a semiconductor device that consists of a voltage detecting device configured to control the conduction and non-conduction of a high side switching device by detecting a potential and supplying a logic value based on that potential. This semiconductor device is used in, as one example, a vehicle's engine control module to control the throttle plate of the engine. In a traditional gasoline engine, the throttle regulates the amount of air that flows into the engine. When a driver applies pressure to the accelerator (gas pedal), the throttle plate opens and allows air into the vehicle's engine. The semiconductor device protected by the '850 Patent is used in an engine's control module to control the throttle plate and ensure it can properly open and close.

60. Plaintiff owns all rights, title, and interest in and to the Asserted Patent and possesses all rights of recovery.

### **FACTUAL ALLEGATIONS**

61. As referred to in this Complaint, and consistent with 35 U.S.C. § 100(c), the “United States” means “the United States of America, its territories and possessions.”

62. None of the Defendants has any right to practice the intellectual property protected by the Asserted Patent.

63. Each Defendant makes, uses, offers to sell, sells, and/or imports into the United States, products made in accordance with the '850 Patent, including but not limited to the Chevrolet Bolt, Honda Accord, Honda Civic, Honda CR-V, Honda Fit, Honda Pilot, Nissan Altima, Nissan Pathfinder, Infiniti Q50, and Infiniti Q60, in addition to other vehicles, and/or induces others to commit acts of patent infringement in the United States.

64. Further, Plaintiff has not made, used, offered for sale, sold, and/or imported into the United States any product that practices the Asserted Patent.

### **COUNT 1** **INFRINGEMENT OF U.S. PATENT NO. 7,049,850**

65. Plaintiff repeats and incorporates by reference each preceding paragraph as if fully set forth herein and further states:

#### **General Motors**

66. General Motors has infringed and continues to infringe at least claim 7 of the '850 Patent in violation of 35 U.S.C. § 271, either literally or through the doctrine of equivalents, by making, using, selling, or offering for sale in the United States, and/or importing into the United States, without authorization, products that practice at least claim 7 of the '850 Patent. General Motors is liable for its infringement of the '850 Patent pursuant to 35 U.S.C. § 271(a), (b), and (c).

67. More specifically, General Motors designs, manufactures, assembles, imports, offers for sale, and/or sells automotive vehicles and components thereof that incorporate the NXP

Semiconductors (“NXP”) MC33926 that infringes at least independent claim 7 of the ’850 Patent, including the Chevrolet Bolt, and/or induces others to commit acts of infringement of at least independent claim 7 of the ’850 Patent.

68. The NXP MC33926 is a monolithic H-bridge power integrated circuit with applications in throttle control for automotive vehicles. An overview of the device, taken from NXP’s website, provides:

## FIGURE 22

### Overview

The 33926 is a monolithic H-Bridge Power IC designed primarily for automotive electronic throttle control but is applicable to any low-voltage DC servo motor control application within the current and voltage limits stated in this specification.

The 33926 is able to control inductive loads with currents up to 5.0 A peak. RMS current capability is subject to the degree of heatsinking provided to the device package. Internal peak-current limiting (regulation) is activated at load currents above  $6.5\text{ A} \pm 1.5\text{ A}$ . Output loads can be pulse width modulated (PWM-ed) at frequencies up to 20 kHz. A load current feedback feature provides a proportional (0.24% of the load current) current output suitable for monitoring by a microcontroller’s A/D input. A Status Flag output reports undervoltage, overcurrent, and overtemperature fault conditions.

Two independent inputs provide polarity control of two half-bridge totem-pole outputs. Two independent disable inputs are provided to force the H-Bridge outputs to tri-state (high impedance off-state). An inverting input changes the IN1 and IN2 inputs to LOW = true logic.

The MC33926 is a [SafeAssure® functional safety solution](#)

Source: <https://www.nxp.com/products/power-management/motor-and-solenoid-drivers/powertrain-and-engine-control/h-bridge-brushed-dc-motor-driver-5-28-v-5-a-20-khz:MC33926>

69. Claim 7 is illustrative of the ’850 Patent. Claim 7 recites: “[a] semiconductor device performing drive control of first and second switching devices connected in series and interposed between a high main power potential and a low main power potential, comprising: a high potential part including a control part configured to control conduction/non-conduction of a high side



switching device which is one of said first and second switching devices; a reverse level shift part configured to level-shift a signal from said high potential part to supply the level-shifted signal to a low side logic circuit operating on the basis of said low main power potential; and a voltage detecting device provided in said high potential part and configured to detect a potential at an output line of said reverse level shift part and to supply a logic value based on said potential for said control part, thereby causing said control part to control conduction/non-conduction of said high side switching device.”

70. The NXP MC33926 meets every element of this claim.<sup>1</sup> The MC33926 is a semiconductor device that controls first and second switching devices connected in series and interposed between a high main power potential and a low main power potential.

71. Further, the NXP MC33926 comprises a high potential part that includes a control part that is configured to control the conduction/non-conduction of a high side switching device, and a reverse level shift part that is configured to level-shift a signal from said high potential part to a low side logic circuit operating on the basis of said low main power potential. A voltage detecting device in the MC33926 is configured to detect a potential at an output of the reverse level shift part and to supply a logic value, based on the potential of the output, to the control part, thereby allowing the MC33926 to control the conduction/non-conduction of the high side switching device.

72. General Motors makes, uses, imports, sells, and/or offers for sale in the United States vehicles and components thereof that incorporate the infringing NXP MC33926, including the Chevrolet Bolt.

73. For example, the Chevrolet Bolt uses an engine control module that incorporates

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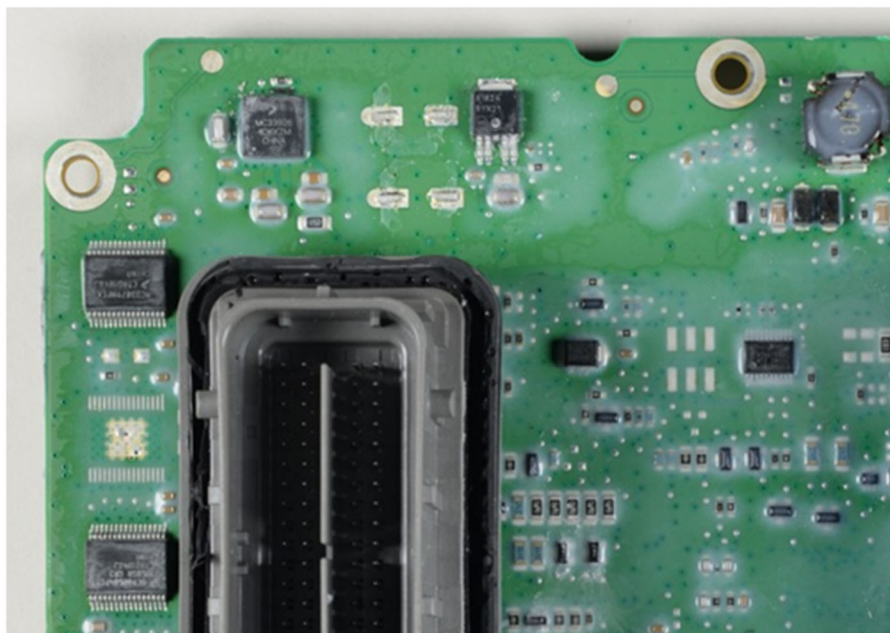
<sup>1</sup> This description of infringement is illustrative and not intended to be an exhaustive or limiting explanation of every manner in which General Motors’ products infringe the ’850 Patent.

the NXP MC33926, see, e.g.:

**FIGURE 23**



**FIGURE 24**



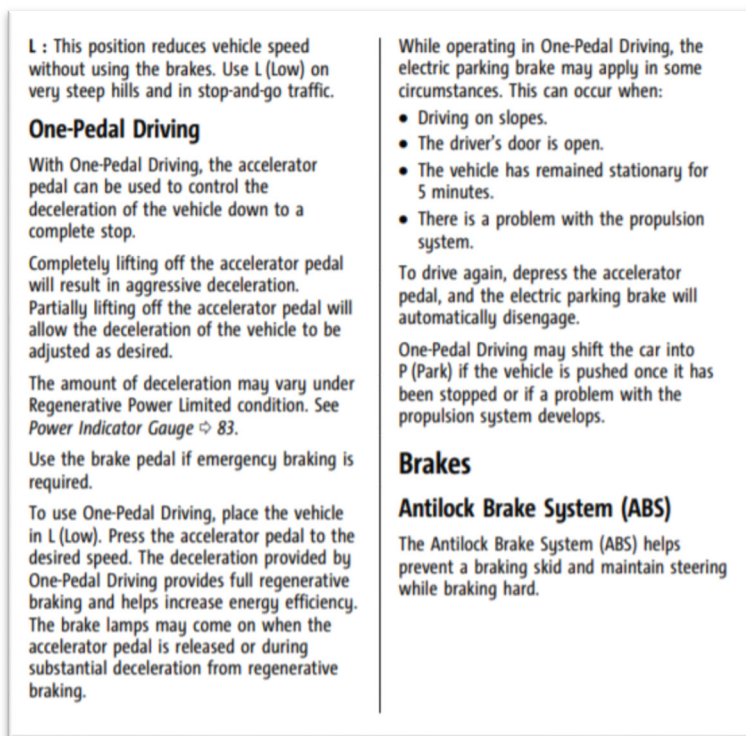
74. General Motors makes, imports, sells, and/or offers for sale in the United States the infringing General Motors vehicles and components identified above, including through, e.g., General Motors authorized dealers located in the Eastern District of Texas.

75. General Motors also knowingly and intentionally induces infringement, literally

and/or under the doctrine of equivalents, of at least claim 7 of the '850 Patent in violation of 35 U.S.C. § 271(b). No later than the filing and service of this Complaint, General Motors has had knowledge of the '850 Patent and the infringing nature of the accused automotive vehicles and components thereof. Despite this knowledge of the '850 Patent, General Motors continues to actively encourage and instruct its customers and end users (for example, through its marketing, user manuals, and online instruction materials) to use the accused automotive vehicles and components thereof in ways that directly infringe the '850 Patent literally and/or under the doctrine of equivalents. General Motors does so knowing and intending that its customers and end users will commit these infringing acts. General Motors also continues to make, use, import, offer for sale, and/or sell the accused automotive vehicles and components thereof, despite its knowledge of the '850 Patent, thereby specifically intending for and inducing its customers to infringe the '850 Patent through the customers' normal and customary use of the accused automotive vehicles and components thereof.

76. As one non-limiting example, General Motors, with knowledge that the accused automotive vehicles and components thereof infringe at least as of the date of this Complaint, knowingly and intentionally induced, and continue to knowingly and intentionally induce, direct infringement of the '850 Patent by providing product manuals that instruct end users how to use the Chevrolet Bolt's accelerator pedal and "One-Pedal Driving" functions, including specifically how to initiate such functions. General Motors induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '850 Patent, but while remaining willfully blind to the infringement.

FIGURE 25



77. General Motors also contributorily infringes the '850 Patent in violation of 35 U.S.C. § 271(c) by making, using, selling or offering to sell within the United States or importing into the United States vehicles and components thereof that incorporate or constitute a material part of the inventions claimed by the '850 Patent, such as, for example, vehicles and components thereof that incorporate, for example, the NXP MC33926. General Motors does so knowing that these components are especially made or especially adapted for uses that infringe the '850 Patent, and not staple articles or commodities of commerce suitable for substantial non-infringing use.

78. General Motors committed the foregoing infringing activities without license from Plaintiff. General Motors' acts of infringement have damaged Arigna, as owner and assignee of the '850 Patent. Arigna is entitled to recover from General Motors the damages it has sustained as a result of General Motors' wrongful acts in an amount subject to proof at trial. General Motors' infringement of Arigna's rights under the '850 Patent will continue to damage Arigna.

79. No later than the filing of this Complaint, General Motors has had actual knowledge of the '850 Patent.

**Honda**

80. Honda has infringed and continues to infringe at least claim 7 of the '850 Patent in violation of 35 U.S.C. § 271, either literally or through the doctrine of equivalents, by making, using, selling, or offering for sale in the United States, and/or importing into the United States, without authorization, products that practice at least claim 7 of the '850 Patent. Honda is liable for its infringement of the '850 Patent pursuant to 35 U.S.C. § 271(a), (b), and (c).

81. More specifically, Honda designs, manufactures, assembles, imports, offers for sale, and/or sells automotive vehicles and components thereof that incorporate the NXP MC33931EK that infringes at least independent claim 7 of the '850 Patent, and/or induces others to commit acts of infringement of at least independent claim 7 of the '850 Patent.

82. The NXP MC33931EK is a monolithic H-bridge power integrated circuit with applications in throttle control for automotive vehicles. An overview of the device, taken from NXP's website, provides:

**FIGURE 26****Overview**

The NXP® MC33931 is a monolithic H-Bridge power IC in a robust thermally enhanced package, designed primarily for automotive electronic throttle control, but is applicable to any low-voltage DC servo motor control application within the current and voltage limits stated in this specification.

- The MC33931 H-bridge is able to control inductive loads with currents up to 5.0A peak
- RMS current capability is subject to the degree of heatsinking provided to the device package. Internal peak-current limiting (regulation) is activated at load currents above 6.5A ±1.5A
- Output loads can be pulse-width modulated at frequencies up to 11 kHz
- Processor Expert® component for medium voltage H-Bridge products enables rapid embedded application development.

Source: <https://www.nxp.com/products/power-management/motor-and-solenoid-drivers/powertrain-and-engine-control/h-bridge-brushed-dc-motor-driver-5-28-v-5-a-11-khz:MC33931>.

83. Claim 7 is illustrative of the '850 Patent. Claim 7 recites “[a] semiconductor device performing drive control of first and second switching devices connected in series and interposed between a high main power potential and a low main power potential, comprising: a high potential part including a control part configured to control conduction/non-conduction of a high side switching device which is one of said first and second switching devices; a reverse level shift part configured to level-shift a signal from said high potential part to supply the level-shifted signal to a low side logic circuit operating on the basis of said low main power potential; and a voltage detecting device provided in said high potential part and configured to detect a potential at an output line of said reverse level shift part and to supply a logic value based on said potential for said control part, thereby causing said control part to control conduction/non-conduction of said high side switching device.”

84. The NXP MC33931EK meets every element of this claim.<sup>2</sup> The MC33931EK is a semiconductor device that controls first and second switching devices connected in series and interposed between a high main power potential and a low main power potential.

85. Further, the NXP MC33931EK comprises a high potential part that includes a control part that is configured to control the conduction/non-conduction of a high side switching device, and a reverse level shift part that is configured to level-shift a signal from said high potential part to a low side logic circuit operating on the basis of said low main power potential. A voltage detecting device in the MC33931EK is configured to detect a potential at an output of the reverse level shift part and to supply a logic value, based on the potential of the output, to the control part, thereby allowing the MC33931EK to control the conduction/non-conduction of the high side switching device.

86. Honda makes, uses, imports, sells, and/or offers for sale in the United States at least the following vehicles and components thereof that incorporate the infringing NXP MC33931EK: the Honda Accord, Honda Civic, Honda CR-V, Honda Fit, and Honda Pilot.

87. For example, the Honda Civic uses a powertrain control module that incorporates the NXP MC33931EK, see, e.g.:

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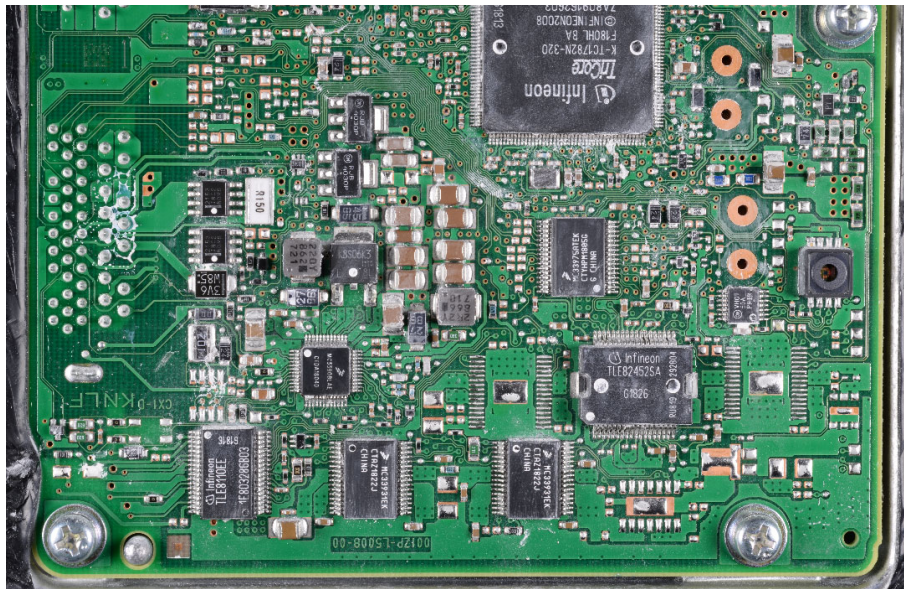
<sup>2</sup> This description of infringement is illustrative and not intended to be an exhaustive or limiting explanation of every manner in which Honda's products infringe the '850 Patent.



**FIGURE 27**



**FIGURE 28**



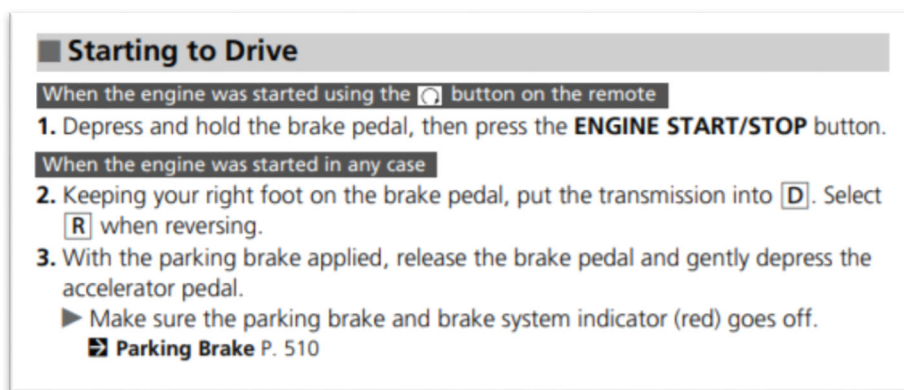
88. Honda makes, imports, sells, and/or offers for sale in the United States the infringing Honda vehicles and components identified above, including through, e.g., Honda authorized dealers located in the Eastern District of Texas.

89. Honda also knowingly and intentionally induces infringement, literally and/or

under the doctrine of equivalents, of at least claim 7 of the '850 Patent in violation of 35 U.S.C. § 271(b). No later than the filing and service of this Complaint, Honda has had knowledge of the '850 Patent and the infringing nature of the accused automotive vehicles and components thereof. Despite this knowledge of the '850 Patent, Honda continues to actively encourage and instruct its customers and end users (for example, through its marketing, user manuals, and online instruction materials) to use the accused automotive vehicles and components thereof in ways that directly infringe the '850 Patent literally and/or under the doctrine of equivalents. Honda does so knowing and intending that its customers and end users will commit these infringing acts. Honda also continues to make, use, import, offer for sale, and/or sell the accused automotive vehicles and components thereof, despite its knowledge of the '850 Patent, thereby specifically intending for and inducing its customers to infringe the '850 Patent through the customers' normal and customary use of the accused automotive vehicles and components thereof.

90. As one non-limiting example, Honda, with knowledge that the accused automotive vehicles and components thereof infringe at least as of the date of this Complaint, knowingly and intentionally induced, and continue to knowingly and intentionally induce, direct infringement of the '850 Patent by providing product manuals that instruct end users how to use the Honda Accord's accelerator pedal functions, including specifically how to initiate such functions. Honda induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '850 Patent, but while remaining willfully blind to the infringement.

FIGURE 29



91. Honda also contributorily infringes the '850 Patent in violation of 35 U.S.C. § 271(c) by making, using, selling or offering to sell within the United States or importing into the United States vehicles and components thereof that incorporate or constitute a material part of the inventions claimed by the '850 Patent, such as, for example, vehicles and components thereof that incorporate, for example, the NXP MC33931EK. Honda does so knowing that these components are especially made or especially adapted for uses that infringe the '850 Patent, and not staple articles or commodities of commerce suitable for substantial non-infringing use.

92. Honda committed the foregoing infringing activities without license from Plaintiff. Honda's acts of infringement have damaged Arigna, as owner and assignee of the '850 Patent. Arigna is entitled to recover from Honda the damages it has sustained as a result of Honda's wrongful acts in an amount subject to proof at trial. Honda's infringement of Arigna's rights under the '850 Patent will continue to damage Arigna.

93. No later than the filing of this Complaint, Honda has had actual knowledge of the '850 Patent.

### **Nissan**

94. Nissan has infringed and continues to infringe at least claim 7 of the '850 Patent in violation of 35 U.S.C. § 271, either literally or through the doctrine of equivalents, by making,

using, selling, or offering for sale in the United States, and/or importing into the United States, without authorization, products that practice at least claim 7 of the '850 Patent. Nissan is liable for its infringement of the '850 Patent pursuant to 35 U.S.C. § 271(a), (b), and (c).

95. More specifically, Nissan designs, manufactures, assembles, imports, offers for sale, and/or sells automotive vehicles and components thereof that incorporate the NXP MC33926 that infringes at least independent claim 7 of the '850 Patent, including the Nissan Altima, Nissan Pathfinder, Infiniti Q50, and Infiniti Q60, and/or induces others to commit acts of infringement of at least independent claim 7 of the '850 Patent.

96. The NXP MC33926 is a monolithic H-bridge power integrated circuit with applications in throttle control for automotive vehicles. An overview of the device, taken from NXP's website, provides:

### FIGURE 30

#### Overview

The 33926 is a monolithic H-Bridge Power IC designed primarily for automotive electronic throttle control but is applicable to any low-voltage DC servo motor control application within the current and voltage limits stated in this specification.

The 33926 is able to control inductive loads with currents up to 5.0 A peak. RMS current capability is subject to the degree of heatsinking provided to the device package. Internal peak-current limiting (regulation) is activated at load currents above  $6.5 \text{ A} \pm 1.5 \text{ A}$ . Output loads can be pulse width modulated (PWM-ed) at frequencies up to 20 kHz. A load current feedback feature provides a proportional (0.24% of the load current) current output suitable for monitoring by a microcontroller's A/D input. A Status Flag output reports undervoltage, overcurrent, and overtemperature fault conditions.

Two independent inputs provide polarity control of two half-bridge totem-pole outputs. Two independent disable inputs are provided to force the H-Bridge outputs to tri-state (high impedance off-state). An inverting input changes the IN1 and IN2 inputs to LOW = true logic.

The MC33926 is a [SafeAssure® functional safety solution](#)

Source: <https://www.nxp.com/products/power-management/motor-and-solenoid-drivers/powertrain-and-engine-control/h-bridge-brushed-dc-motor-driver-5-28-v-5-a-20->

khz:MC33926

97. Claim 7 is illustrative of the '850 Patent. Claim 7 recites: “[a] semiconductor device performing drive control of first and second switching devices connected in series and interposed between a high main power potential and a low main power potential, comprising: a high potential part including a control part configured to control conduction/non-conduction of a high side switching device which is one of said first and second switching devices; a reverse level shift part configured to level-shift a signal from said high potential part to supply the level-shifted signal to a low side logic circuit operating on the basis of said low main power potential; and a voltage detecting device provided in said high potential part and configured to detect a potential at an output line of said reverse level shift part and to supply a logic value based on said potential for said control part, thereby causing said control part to control conduction/non-conduction of said high side switching device.”

98. The NXP MC33926 meets every element of this claim.<sup>3</sup> The MC33926 is a semiconductor device that controls first and second switching devices connected in series and interposed between a high main power potential and a low main power potential.

99. Further, the NXP MC33926 comprises a high potential part that includes a control part that is configured to control the conduction/non-conduction of a high side switching device, and a reverse level shift part that is configured to level-shift a signal from said high potential part to a low side logic circuit operating on the basis of said low main power potential. A voltage detecting device in the MC33926 is configured to detect a potential at an output of the reverse level shift part and to supply a logic value, based on the potential of the output, to the control part, thereby allowing the MC33926 to control the conduction/non-conduction of the high side

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<sup>3</sup> This description of infringement is illustrative and not intended to be an exhaustive or limiting explanation of every manner in which Nissan's products infringe the '850 Patent.



switching device.

100. Nissan makes, uses, imports, sells, and/or offers for sale in the United States at least the following vehicles and components thereof that incorporate the infringing NXP MC33926: the Nissan Altima, Nissan Pathfinder, Infiniti Q50, and Infiniti Q60.

101. For example, the Infiniti Q50 and Infiniti Q60 use an engine control module that incorporates the NXP MC33926, see, e.g.:

**FIGURE 31**



**FIGURE 32**

102. Nissan makes, imports, sells, and/or offers for sale in the United States the infringing Nissan vehicles and components identified above, including through, e.g., Nissan authorized dealers located in the Eastern District of Texas.

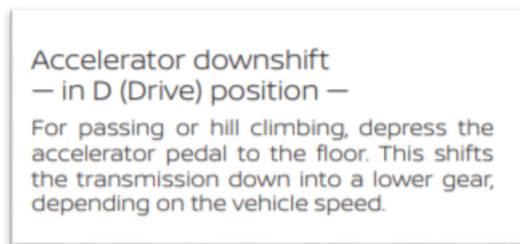
103. Nissan also knowingly and intentionally induces infringement, literally and/or under the doctrine of equivalents, of at least claim 7 of the '850 Patent in violation of 35 U.S.C. § 271(b). No later than the filing and service of this Complaint, Nissan has had knowledge of the '850 Patent and the infringing nature of the accused automotive vehicles and components thereof. Despite this knowledge of the '850 Patent, Nissan continues to actively encourage and instruct its customers and end users (for example, through its marketing, user manuals, and online instruction



materials) to use the accused automotive vehicles and components thereof in ways that directly infringe the '850 Patent literally and/or under the doctrine of equivalents. Nissan does so knowing and intending that its customers and end users will commit these infringing acts. Nissan also continues to make, use, import, offer for sale, and/or sell the accused automotive vehicles and components thereof, despite its knowledge of the '850 Patent, thereby specifically intending for and inducing its customers to infringe the '850 Patent through the customers' normal and customary use of the accused automotive vehicles and components thereof.

104. As one non-limiting example, Nissan, with knowledge that the accused automotive vehicles and components thereof infringe at least as of the date of this Complaint, knowingly and intentionally induced, and continue to knowingly and intentionally induce, direct infringement of the '850 Patent by providing product manuals that instruct end users how to use the Nissan Altima's Accelerator downshift functions, including specifically how to initiate such functions. Nissan induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '850 Patent, but while remaining willfully blind to the infringement.

### FIGURE 33



105. Nissan also contributorily infringes the '850 Patent in violation of 35 U.S.C. § 271(c) by making, using, selling or offering to sell within the United States or importing into the United States vehicles and components thereof that incorporate or constitute a material part of the

inventions claimed by the '850 Patent, such as, for example, vehicles and components thereof that incorporate, for example, the NXP MC33926. Nissan does so knowing that these components are especially made or especially adapted for uses that infringe the '850 Patent, and not staple articles or commodities of commerce suitable for substantial non-infringing use.

106. Nissan committed the foregoing infringing activities without license from Plaintiff. Nissan's acts of infringement have damaged Arigna, as owner and assignee of the '850 Patent. Arigna is entitled to recover from Nissan the damages it has sustained as a result of Nissan's wrongful acts in an amount subject to proof at trial. Nissan's infringement of Arigna's rights under the '850 Patent will continue to damage Arigna.

107. No later than the filing of this Complaint, Nissan has had actual knowledge of the '850 Patent.

#### **DEMAND FOR JURY TRIAL**

108. Plaintiff Arigna hereby demands a jury trial for all issues so triable.

#### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff Arigna requests entry of judgment in its favor and against Defendants as follows:

- A. Declaring that Defendants General Motors, Honda, and Nissan have each infringed United States Patent No. 7,049,850;
- B. Declaring that Defendants General Motors', Honda's, and Nissan's infringement of United States Patent No. 7,049,850 has been willful and deliberate, at least from the filing of this Complaint;
- C. Awarding damages to Plaintiff in an amount no less than a reasonable royalty for each Defendant's infringement of United States Patent No. 7,049,850, together with

- prejudgment and post-judgment interest and without limitation under 35 U.S.C. § 287;
- D. Awarding attorney's fees pursuant to 35 U.S.C. § 285 or as otherwise permitted by law; and
- E. Awarding such other costs and further relief as the Court may deem just and proper.

Dated: May 20, 2021

By: */s/ Matthew R. Berry w/permission Claire  
Abernathy Henry*

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